

REMARKS

Claims 1-9 are pending. Claim 1 has been amended. No new matter has been presented.

The drawings were objected to on the grounds that Figs. 3-6 lacking the legend "Prior Art." Replacements drawings are attached which contain the proper legend. Withdrawal of this objection is respectfully requested.

Claims 1-9 are rejected under 35 USC 103(a) as being unpatentable over Nishimura, U.S. Patent No. 5,822,350, in view of Narui, U.S. Patent No. 6,468,820 and further in view of Saeki, U.S. Patent No. 6,483,127. This rejection is respectfully traversed.

Claim 1 has been amended to recite that "the light confinement layer is sufficiently thin such that it does not function as a current constriction layer." Support for this amendment can be found in the specification at paragraphs [0022], [0023] and [0058].

The Examiner asserts that Nishimura teaches a light confinement layer which is provided in a region other than an upper surface of the ridge portion of each of the second cladding layers (citing Fig. 13, element 6). However, the current blocking layer 6 of Nishimura does not correspond to the claimed light confinement layer.

Claim 1 recites both a light confinement layer and a dielectric layer. As explained in the specification at paragraph [0022], the light confinement layer functions as the transverse mode control layer for confining light in the second cladding layer. The dielectric film on the light confinement layer functions as the current constriction layer. Since the light confinement layer does not actually function as the current constriction layer (the dielectric film does this), the layer can be made thin enough to function as a transverse mode control layer. Also, because the light confinement layer is thin, the light confinement layer formed on the ridge portion becomes roughly flat, which allows etching to easily remove the unnecessary portion of the light confinement layer on the ridge portion. Thus, deep etching in unnecessary and exposure of the second cladding layer of the side surfaces of the ridge portion can be avoided. This achieves stable light confinement in the second cladding layer. Accordingly, the light confinement layer

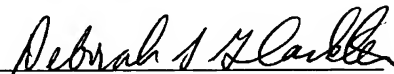
of Nishimura is quite different from the claimed light confinement layer. Accordingly, Nishimura fails to teach that which the Examiner asserts.

The remaining claims are allowable at least due to their respective dependencies. Applicants request that this rejection be withdrawn.

In the event the U.S. Patent and Trademark Office determines that an extension and/or other relief is required, applicants petition for any required relief including extensions of time and authorize the Commissioner to charge the cost of such petitions and/or other fees due in connection with the filing of this document to Deposit Account No. 03-1952 referencing docket no. 204552030700.

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Respectfully submitted,

By 

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Attachments

REPLACEMENT SHEETS

AMENDMENTS TO THE DRAWINGS

The attached sheets of drawings include changes to Figs. 3-6 to insert the legend
“Prior Art” where appropriate.

Attachment: 4 replacement sheets